

紫外光固化喷墨打印字符材料 UV Curable Inkjet Marking mat. IJM-300 WM01

IJM-300 WM01 是我公司自主研发, 拥有自主知识产权的 UV 固化喷墨打印 PCB 油墨, 专利公开号: ZL 2017 1 0927755.X. 此产品采用国外进口原材料及生产检测设备, 产品性能达到同类产品国际领先水平。产品特点有:

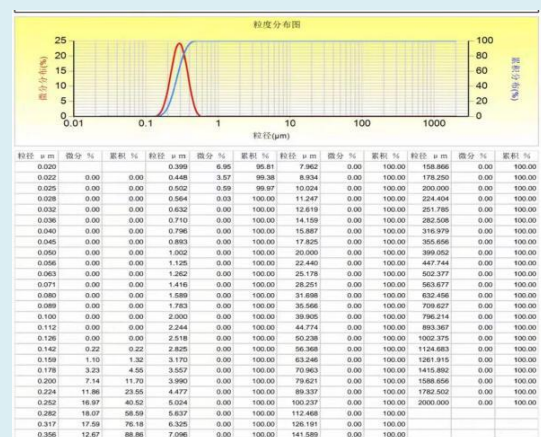
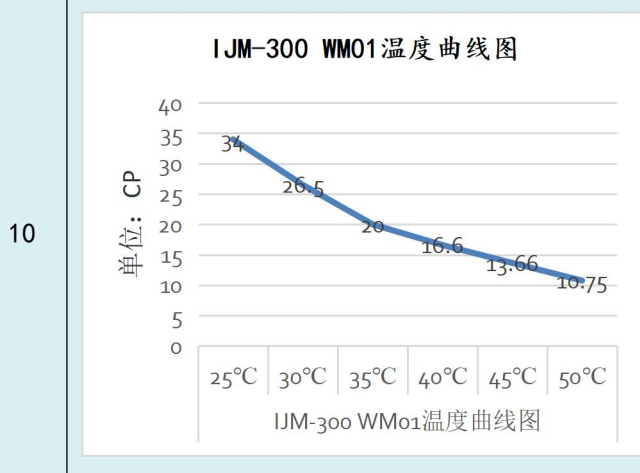
- 1、较低的 UV 能量可快速固化, 可以 LED 光源固化。
- 2、较好的储存沉降稳定性、良好的喷墨稳定性。50°C 条件下放置 30 天不返粗。
- 3、良好的表面硬度及阻焊性, 表面硬度可以 6H 以上, 良好的遮盖性和耐黄变性。
- 4、产品符合欧盟 RoHS、REACH 要求, 环保无卤。

IJM-300 WM01 is a UV Curable Inkjet Marking mat. PCB ink independently developed by our company with independent intellectual property rights. Patent Number: ZL 2017 1 0927755.x. This product adopts imported raw materials and production testing equipment, and its performance reaches the international leading level of similar products. Product features:

- 1、Fast cured with low UV energy requirement. LED light can be cured.
- 2、Good settling stability. Jet stability and low nozzle failure. Don't return coarse for 30 days at 50 degree C.
- 3、good surface hardness and welding resistance, surface hardness can be more than 6H, good coverage and resistance to yellowing.
- 4、The products meet the requirements of EU RoHS REACH and are environmentally friendly and halogen-free

一、物性 General properties

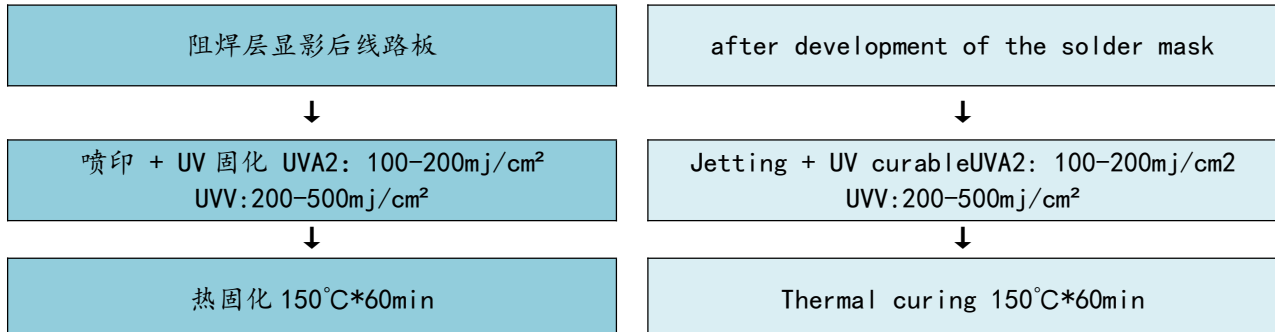
1	型号 Main agent	IJM-300 WM01
2	颜色 Color	白色 white
3	比重 Specific gravity	1.20
4	表面张力 Surface tension	21-25mN/m at 20-25°C
5	保存期限 Shelf Life	6 months after manufacturing (Stored in cool and dark place at 10-20°C)
6	包装规格 Package	1Kg/Cans (瓶), 10Kg/Box (箱)
7	粘度 Viscosity (at 25°C)	33-37cP (Brookfield 40# 80rpm, 25°C)
8	粒径 Grain dicmeter	D97 ≤ 480nm
9	粘度温度曲线	激光粒径分析



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二、应用操作流程 Processing instructions

半固化阻焊工艺 semi-cured solder mask



备注: 我们推荐客户使用半固化阻焊工艺, 不使用全固化阻焊工艺。

We recommend customers adopt semi-cured solder mask processing. We recommend customer use the semi-cured solder mask processing, not the full -cured solder mask processing

三、制程注意事项 attention on process

1、本公司喷印油墨, 属纳米级产品。客户使用车间若洁净度不够, 灰尘混入油墨中, 可能导致喷头堵塞。产品在储存及使用过程中, 都应特别注意防尘。

Keep the operation room cleaned. the product must be protected for dust.

2、喷印前的板子都应特别注意其洁净度, 防止污染。若线路板本身已被污染, 应采取措施进行处理, 否则会影响喷印油墨的附着力等可靠性。

The contamination of board cause the quality and reliability deterioration.

3、工作洁净室的环境温度应控制在 20-25 度, 湿度 50-60%。

Operating in the clean room of the ambient temperature at 20-25°C/50-60%RH.

4、此油墨应在黄光灯下使用, 避免阳光或紫外光直射。

Avoid direct exposure to UV and sunlight. Desirable to use ink in yellow lamps.

5、此油墨一般情况下不需要添加开油水可直接使用。不可以添加线路板厂常规开油水使用, 若有特殊情况必须添加开油水时请与我司联系。

Desirable to use ink without dilution. When necessary, Inquire of ours. Because dilution may deteriorate the properties. In this case, solvent must not be applicable.

6、涂层厚度应控制在固化后 10-20um 为佳, 若涂层太厚, 容易开裂、附着力、耐化性变差及硬度下降。

Coating thickness should be controlled at 10-20um after curing is preferred. If the coating is too thick, it will be prone to cracking, poor adhesion, corrosion resistance and hardness.

7、固化条件, 因设备光源不同, 需咨询设备商, 经过测试, 找出合适的条件。固化条件不合适时, 会引起涂层性能达不到产品预期效果。

As curing condition is variable depending on the type of lamps and the intensity of radiation, set it suitable to your process after testing. Curing condition out of the specified tolerance range may deteriorate the properties of resist coating.

8、清洁喷印头及喷印管道, 请使用我司专用清洗液 LN01 清洁。

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For cleaning ink jet head, please use our special cleaner LN01 .

9、严禁使用光源直接照射油墨或喷头，光源包括：手机后置光源、手电筒等可见光源。若必须照光检查时，可以将光源贴上黄光膜或红光膜后使用。若油墨被光源照射，容易引起油墨固化，进而堵塞喷头。

It is strictly prohibited to use the light source to directly illuminate the ink or sprinkler head. The light sources include: mobile phone rear light source, flashlight and other visible light sources. If light must be examined, the light source can be affixed with a yellow or red light film after use. If the ink is illuminated by the light source, easy to cause ink curing, and then plug the nozzle.

四、涂膜性能 PROPERRTIES

要求 Requirement	测试方法 Test Method	结果 Result
防霉性 Nonnutrient	IPC-TM-650 2.6.1	OK
表面状况 Visual Requirements	IPC-SM-840E 3.3.1	OK
铅笔硬度 Pencil Hardness	ASTM D3363 (0.5Kg)	6H
附着力 Adhesion	IPC-TM-650 2.4.28.1	OK
Mach inability 可加工性	IPC-TM-650 2.4.7.1	OK
耐溶剂 Solvents Resistance	IPC-TM-650 2.3.42 涂膜无分离 No peeling	OK
耐化学试剂 Acid & Alkaline Resistance	IPC-SM-840E 3.6.1.2 10vol% H2SO4 20°C*30min 10wt% NaOH*20°C*30min	OK
水解稳定性 Hydrolytic Stability	IPC-TM-650 2.6.11	OK
可焊性 Solder ability	J-STD-003 260±5°C*10 秒*3 次	OK
耐焊性 Resistance to Solder	IPC-TM-650 2.6.8 助焊剂应依据 J-STD-004, 使用 ROM0 或 ROM1 Flux shall be a ROM0 or ROM1 per J-STD-004 浮锡 Solder Float 260°C*10 秒*3 次	OK
Simulation of Lead Free Reflow 无铅回流焊模拟	IPC-SM-840E 3.7.3.1 Solder Float 浮锡 260°C*10 秒*5 次	OK
介电强度 Dielectric Strength	IPC-TM-650 2.5.6.1	1000 V DC/mil
绝缘电阻 Insulation Resistance	IPC-TM-650 2.6.3.1	≥8.4×10 ¹¹ Ω
耐湿绝缘电阻 Moisture and Insulation Resistance	IPC-TM-650 2.6.3.1	≥5.0×10 ¹¹ Ω

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电迁移 Electrochemical Migration	IPC-TM-650 2.6.14	OK
冷热冲击 Thermal Shock	IPC-TM-650 2.6.7.3 -65°C to +125°C *100 Cycles -65°C 到 +125°C *100 次	OK

此资料为本公司试验结果，不作为保证之用。适宜之条件，需参照操作指引，待贵公司实施确认后，再予以确定。

This information is our test results, not as a guarantee. The suitable condition, need to consult Processing instructions, to be your company carry out confirmation, to be determined.

若英文内容与中文内容有差异，以中文为准。

In case of any discrepancy between the English and Chinese content, the Chinese version shall prevail.